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RECORD OF ORAL HEARING

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HANS-DETLEF LUGINSLAND,
ANDRE WEHMEIER, OLEG STENZEL,
and STEFAN UHRLANDT

Appeal 2010-001210
Application 10/542,850
Technology Center 1700

Oral Hearing Held: July 15, 2010

Before TERRY J. OWENS, TONI R. SCHEINER and MARK NAGUMO, Administrative Patent Judges.

On Behalf of the Appellants:

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The above-entitled matter came on for hearing on Thursday, July 15, 2010, commencing at 9:30 a.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, 9th Floor, Hearing Room A, Alexandria, Virginia, before Kevin Carr, court reporter.

THE USHER: Calendar Number 16, 2010-001210, DR. GRUNEBERG.

DR. GRUNEBERG: Good morning. I have a copy of the Appeal Brief and my business card. Well, may it please the Board, I think I'd like to immediately like to jump into what the issue is here in this case. As you know, we're claiming a precipitated silica having various chemical and physical properties, and I need my glasses to see. I apologize. And the question or one of the important questions in the case is whether the references disclose a certain number of Silanol groups per surface area, in other words a high Silanol groups density. And why is it important? It's important as discussed in the Appeal Brief at page 4 and also in the Specification at page 5 to page 6.

The precipitated silicates of the invention have not only a high absolute number of Silanol groups as expressed by the Sears value, V2, but also in comparison with other precipitated silica, a markedly increased ratio of Sears value to BET's surface area. And what that means is that there is a very high number of Silanol groups based on the total surface area.

Now, the Esch reference, as you also very well know from the Appeal Brief, discloses broad ranges of the BET surface area as well as a Sears number; and the Examiner has argued throughout prosecution that, well, you can just divide the two and then you come up with something that is close to what we are doing. Well, our argument is that if you look at the

examples of the Esch reference you can of course calculate a certain ratio of Sears value to BET surface area, and even their highest value based on the examples comes up short. It's 25% lower than the lowest limit that we are claiming. And it's really not so much.

Of course, you can disclose as Esch does a range of Silanol groups but the question is is that number based on a football field or is it based on, you know, the size of my glasses. So that's really the question. That's the difference, and our argument is that if you look at the examples, if Esch had had this particular ratio that we are claiming, they would have exemplified that; and, moreover, only one of the precipitated silicas that Esch exemplifies, namely the Example 3, became a commercial product.

Now, if you think about the examples that we have compared to exactly Example number 3, which became a commercial product of Esch; and, it is shown that we achieve much better organization times, greater vulcanization rates, lower Mooney viscosities. And that is clearly based on more Silanol groups on a smaller area, BET surface area. So, really the main argument is that the Esch reference simply did not have the particular ratio and the other references, the Boyer reference, Luginsland, as well as Urlandt, did not have the ratio as well. And that is a summary of my argument.

JUDGE NAGUMO: Is this a matter of failure of prima facie obviousness or a matter of unexpected results? Because Esch does teach a range of BET surface areas, so all of the data is, well, at least in the ranges is there. And I take it you don't contest that Esch is at least generic in some sense to what you're claiming.

DR. GRUNEBERG: I do contest that because what I'm saying is yes, Esch discloses a general broad range of Silanol groups. Yes, they do have a certain BET surface area, but what they don't show at all anywhere, neither in the broad disclosure nor in the examples, is a precipitated silica that has a very high ratio of the Sears value to BET surface area.

JUDGE NAGUMO: Well, that would be anticipation.

DR. GRUNEBERG: Correct. I understand what you're saying. I understand what you're saying, but the key is that they really have, you know, a large density of Silanol groups on a small surface area and they didn't. They just broadly had a certain range of Silanol groups, but they didn't tell us is that in a large area or in a small area. We don't know. And remember the Esch reference, as well as Luginsland and Uhrlandt, they're all the same Assignee as this present case, so they're all from the same company. And, clearly, if they had had this, they would have written this in the specification. They would have exemplified and they would have made a product out of it because it's much better than what they have.

JUDGE NAGUMO: Well, but how do I distinguish cases, some of the alloy cases, for example, like Peterson and Harris where the court has indicated that if you had broad ranges disclosed and to come with the claim that is within those ranges, often there is prima facie obviousness. So my question in a sense, are these results that you're presenting unexpected?

DR. GRUNEBERG: Yes.

JUDGE NAGUMO: And in a sense we know why these things interact with the silicates because of the Silanol groups interacting with the rubbers. Those are available for reaction with groups.

DR. GRUNEBERG: That's right.

JUDGE NAGUMO: So if you have more of them per unit area, you would expect more. So in that sense it would be an expected result. So that's why I have this question. Should I look at this as a failure of prima facie obviousness or as unexpected results.

DR. GRUNEBERG: Well, I think the first step is that I would argue the failure of prima facie obviousness. Now, I understand what you're saying. They're the broad ranges, so it must be there. But in this particular art it is not very easy to actually pack as many Silanol groups. That's really the crux of the invention. You have to pack as many Silanol groups on a specific surface area, and that's, you know, where I sort of anticipated that you would ask a question. But even if, you know, the Examiner, or you think there's a prima facie case of obviousness, then we come in with the data and we are showing that, you know, we actually were able to pack as many Silanol groups on a very small surface area and therefore achieve, you know, all the properties that we have in the declaration.

JUDGE NAGUMO: What evidence would you point to in the record that we could make that finding, that it was hard to achieve the densities or it was not known how to achieve those densities in the prior art compared to what you've done now?

DR. GRUNEBERG: Right. Most notably, we have the declaration with the Example 3 of Esch, which is again we believe the closest prior art. That's the best example they have. They commercialized it. That's the only commercial product they have. So if you compare to that why in the world if they had a great ratio as we are having, why didn't they put it in there? Why didn't they commercialize it right then, same company.

They could have done it. They didn't, because they didn't have it. It didn't have the density of Silanol groups.

JUDGE OWENS: Well the question is would it have suggested to one of ordinary skill in the art maybe more than they disclosed.

JUDGE NAGUMO: Is this basically an enablement, the prior art is not capable of obtaining these --

DR. GRUNEBERG: I have not specifically argued on the record enablement, but if you want to go down that road, probably we could argue that, but I have not argued that on the record, so.

JUDGE NAGUMO: Well, we are dealing with rejections of record and I'm trying to probe which of these options here for patentability you were urging us to follow, I mean specifically. Because of course you would like us to, so I'm looking for the evidence that you would point to that would assist us.

DR. GRUNEBERG: The evidence that I'm pointing to is that the Esch reference, which is the closest prior art, did not have the specific ratio. It is not disclosed, and the examples, most notably Example 3, which became a commercial product, did not have the specific ratio that we are claiming. And, again, and I'm repeating myself. I realize that if they had had the ratio they would have made it a product right then, and they did not, so.

JUDGE OWENS: If you go to Esch's column 2, line 13 or so, there's a table there.

DR. GRUNEBERG: Yeah.

JUDGE OWENS: If you divide Sears value by BET surface area and multiply that by 5, how is that number not comparable to what is in your Claim 1.

DR. GRUNEBERG: Can you please repeat the column and line number?

JUDGE OWENS: Column 2, line 13.

DR. GRUNEBERG: Oh, yeah. That's the broad disclosure of Escher.

JUDGE OWENS: You divide the Sears value by the BET surface area and multiply by 5.

DR. GRUNEBERG: Right.

JUDGE OWENS: Can't you get numbers that are similar to the ones in the range in your Claim 1?

DR. GRUNEBERG: I understand what you're saying, and that again goes back to the argument. Yes, they have, you know, the broad ranges, but they're not telling us really how to achieve a very specific ratio, just because I have a large, general Silanol number. It's not correlated to a specific BET surface area and so I could have a total Silanol number on a very large surface area, so having a very small density, which is very different from what we are doing.

So what I'm trying to say is just dividing those numbers -- and we argued that on the record as well -- just dividing those numbers is not going to get you the ratio. You would come up with the ratio, because you wouldn't be able. They're not telling us that they're actually packing those Silanols on a very small BET surface area.

JUDGE OWENS: It gives you milliliters per five meters squared. What's missing from that?

DR. GRUNEBERG: Right. I understand what you're saying, but again, where here do they show that they have a specific density? They don't show it. They just have the broad ranges. It's not there so that's the argument.

JUDGE NAGUMO: Is there evidence in the record that the importance of the ratio was not known that the Sears value, V2 to BET, is there evidence that this was not recognized? And is it possible now -- or let me stick with the first question.

DR. GRUNEBERG: Okay. Again, if the specific ratio had been recognized by Esch as being important they would have described it and they did not. They would have exemplified it, and they did not. They probably would have commercialized a product because a product with that ratio is better. We are showing that, and they did not, so that's --

JUDGE NAGUMO: Thank you. No more questions?

JUDGE OWENS: No more questions.

DR. GRUNEBERG: Okay. Well, thank you so much for your time. I appreciate it.

Whereupon, at 9:46 a.m., the proceedings were concluded.